

REMARKS

Claims 1, 5, 10 and 31 are pending in this application, claims 3, 8, and 9 having been cancelled and claim 31 being newly added by the above amendment. Of these claims, claim 1 stands rejected under 35 USC § 103(a) being unpatentable over Hamada et al. in view of James et al. and claims 8-10 stand rejected under 35 USC § 103(a) as being unpatentable over Hamada et al. in view of James et al. and Kumar. Further, claim 3 stands rejected under 35 USC § 112, second paragraph, as being indefinite because of use of the term "slower."

In view of the preceding amendments and the following remarks, these rejections are traversed, and reconsideration of this application is respectfully requested.

Dependent claim 3 has been cancelled by the above amendment rendering the § 112, second paragraph, rejection moot. It is therefore respectfully requested that this rejection be withdrawn.

Independent claim 1 has been amended above to state that the bleed valve is at least one fixed orifice that continually bleeds the anode exhaust gas from the accumulator at a slower rate than the purge valve purges the anode exhaust gas into the accumulator. Support for this can be found in the specification in at least paragraph [0019] where it states that the contents of the accumulator 26 can be slowly removed through the bleed valve 30 before the next purge cycle, and paragraph [0020] where it states that the bleed valve 30 can be a fixed orifice where the amount of the anode exhaust gas bled through the orifice is continuous. Applicant respectfully submits that the prior art of record does not teach or suggest that the bleed valve can be a fixed orifice that bleeds anode exhaust gas from an accumulator.

U.S. Patent No. 6,406,805 issued to James et al. discloses a method for storing a purged anode gas from a fuel cell system 10. The fuel cell system 10 includes a three-way valve 26 that is controlled by a controller 24 for purging anode exhaust gas from a fuel cell to a water removal device 28 and then to a hydrogen storage container 30. A vent valve 34 is controlled by the controller 24 to purge the anode gas from the container 30.

Japanese Patent Publication No. 11-191422 to Akira et al. discloses a fuel cell system including a fuel cell 10. A gas exhausting pipe 74 allows anode exhaust gas from the fuel cell 10 to be sent to a tank 54. A gas exhausting pipe 76 is connected to the tank 54 and to a mixer 78 through needle valves 80 and 82. Paragraph [0021] states that the needle valves 80 and 82 are electromagnetic valves.

Applicant respectfully submits that James et al. only discloses that the vent valve 34 is a controllable valve that is selectively opened and closed based on a signal from the controller 24. Therefore, it is clear that James et al. does not teach or suggest that the vent valve 34 can be a fixed orifice that continuously allows gas in the container 30 to be vented. Likewise, the needle valves 80 and 82 in Akira et al. are electromagnetically controlled valves for selectively controlling the flow of the gas from the tank 54 to the mixer 78, and are not fixed orifices that continually allow a gas flow from the tank 54 to the mixer 78.

As discussed in paragraph [0020] of the specification, providing a fixed orifice valve may provide better results for a certain type of fuel cell system over a bleed valve that is selectively opened and closed. Applicant respectfully submits that because neither James et al. nor Akira et al teach or suggest that their valve at the output of the collection tank can be a fixed orifice valve, the combination of these two references does not make independent claim 1 obvious as amended.

U.S. Patent No. 5,785,298 issued to Kumar discloses a proportional solenoid gas driven valve control assembly. It is believed that the Examiner is relying on Kumar to teach solenoid as controlled valves. As discussed above, the bleed valve is a fixed orifice valve and not a solenoid-control vale. Therefore, Applicant respectfully submits that Kumar cannot providing the teaching missing from James et al. and Akira et al. to make Applicants claimed invention obvious.

In view of the preceding amendments and remarks, it is respectfully requested that the section 103(a) rejections be withdrawn.

It is now believed that this application is condition for allowance. If the believes a personal contact with applicants represented and would expedite prosecution of this application, he is invited to call the undersigned at his convenience.

Respectfully submitted,

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